Reviewer's report

Title: Gender, socio-economic status and metabolic syndrome in middle-aged and old adults

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Reviewer: Vasilios G Athyros

Reviewer's report:

General

The paper by Ana-Cristtiina Santtos, et al “GENDER, SOCIO-ECONOMIC STATUS AND METABOLIC SYNDROME IN MIDDLE-AGED AND OLD ADULTS” has relevance to the audience of this journal.

The aim of this study was to evaluate the association between social class and metabolic syndrome in a sample of urban middle-aged and old Portuguese adults.

The study had a cross sectional design and included 1962 subjects (1207 women and 755 men) aged 40 years or more. Marital status, education, occupation, menarche age and height distribution were used as socio-economic indicators.

ATP III defined metabolic syndrome (MS) was significantly more frequent in females (24.9% vs 17.4%). In both genders the odds favoring MS significantly increased with age, while only in females the odds of having MS increased in unfavorable social class as described by occupation and decreased education level.

The authors conclude that gender has an influence on the association between socioeconomic status and MS.

The manuscript is an analysis on a relevant issue.

The background, the statistics and the literature are sufficient.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Major

1. Was the study population a representative sample of Portuguese (Porto) population?

I ask this because in Table 2B only 6 subjects characterized as unemployed had MS and the percentage was 23.1%. This means that 25 out of 755 men included
were unemployed (3.3%). This percentage is way too low for European standards. By the way male or female prevalence of metabolic syndrome is not probably the correct expression. The same applies for social class since in social class V only 25 men seem to be included (by the way are they the same men in both cases?)

2. Are these (mentioned above) small numbers sufficient to let authors reach safe conclusions?

3. Both in Tables 2A and 2B it is mentioned that: * -OR age adjusted, ** -OR adjusted for age and systolic blood pressure, † -OR adjusted for age, systolic blood pressure, total physical activity, alcohol consumption and cigarette smoking. Is it useful to adjust ORs for only one of the components of MS?

4. In Table 1 it is mentioned that 72.6% of participating women and 75.9% of participating men had arterial hypertension. This seems to be an exceptionally high percentage for both genders deriving from the general population even for the lower 130/85 mm Hg threshold used for the ATP III defined MS. This percentage is usually found in men and women having the MS. Is there a local reason that might account for this high percentage? (i.e. excessive consumption of Porto wine?)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Minor

The numbers in columns 2 and further in Table 1 should be one line down in the Education (years) row.

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests